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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,448	09/25/2003	Carl F. Dadson	038190/269365	5530

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EXAMINER

VANNUCCI, JAMES

ART UNIT PAPER NUMBER

2828

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/670,448	<b>Applicant(s)</b> DADSON ET AL.	
	<b>Examiner</b> Jim Vannucci	<b>Art Unit</b> 2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-22 is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9-25-03</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5, 7-9, 11 and 13-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Modisette et al.(4,778,985).

Claims 1 and 11, figure 6 discloses a laser light source(72), a scanner(76) that receives laser light from the laser light source and redirects the laser light, a processor that controls operation of the scanner to generate an infrared image(col. 12, 56-61), and a target plate(92) that receives the redirected laser light from the scanner upon which an infrared image is generated.

Claim 5, figure 4 discloses a target plate with a transparent heat sink layer(14) facing a scanner(layer is a heat sink because it is metallic), an insulator layer(16) adjacent the transparent heat sink layer, and an emissive layer(18) that is at least opaque and adjacent to the insulator layer(layer is emissive because it supports a current density).

Claim 7, an insulator layer of heat-resistant glass is disclosed(col. 6, lines 41-43).

Claim 8, an emissive layer comprising carbon is disclosed(col. 8, line 16).

Claim 9, figure 7 discloses a collimator(106) disposed opposite the scanner relative to the target plate.

Claim 13, figure 7 discloses collimating(146) the image for viewing by a sensor(158).

Claim 14, since the layer(14) is metallic, it acts as a heat sink that draws heat out of the target plate after scanning the laser light across the target plate to prevent the laser light from heating portions of the target plate other than the portion on which the laser light is incident.

Claim 15, the disclosed laser is controlled such that it transmits laser light at one or more power levels(col. 12, lines 1-2).

Claim 16, figure 7 discloses generating an image by receiving laser light having a first power level to generate a portion of the image having a first temperature, receiving the laser light having a second power level to generate a portion of the image having a second temperature, and where the second power level and second temperature are less than the first(col. 12, lines 1-3).

Claim 17, figure 7 discloses generating an infrared image by receiving the laser light for a first period of time to generate a portion of the image having a first temperature, receiving the laser light for a second period of time to generate a portion of the image having a second temperature, and where the second period of time and second temperature are less than the first period of time and first temperature(col. 12, lines 16-17).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-4, 6, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Modisette.

Claim 2, diode pumped solid-state laser light sources are very common in the imaging device art.

Claim 3, a processor that controls output power of the laser light source would be obvious in light of the disclosure of Modisette(col. 11, line 68).

Claim 4, figure 7 of Modisette discloses an amplifier(124) that can be considered part of the scanner(116).

Claim 6, a transparent heat sink layer made of diamond would be obvious over the disclosure of Modisette concerning the types of materials possible for this layer(col. 6, lines 20-21).

Claims 10 and 12, given the laser disclosed in Modisette(col. 12, lines 43-45) the target plate on which the infrared image is generated displays an image that can have a portion that is at temperature of at least 1000 Kelvin.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the above elements in the recited manner in the device disclosed in Modisette since the above elements are commonly used in the recited manner in the

laser imaging art.

***Allowable Subject Matter***

5. Claims 18-22 are allowed.
6. The following is a statement of reasons for the indication of allowable subject matter. The following limitations are primarily responsible for distinguishing these claims over the prior art.

Regarding claims 18-22, the limitations concerning a target element capable of receiving the redirected laser light from the at least one scanning element on a first side of the target element and capable of displaying at least one infrared image on a second side of the target element that is opposite the first side, and an infrared sensor element facing the second side of the target element wherein the processing element is also capable of determining whether the sensor element detects the at least one infrared image.

***Correspondence***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Jim Vannucci whose phone number is (571) 272-1820.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center whose telephone number is (703) 308-0956.

Papers related to Technology Center 2800 applications only may be submitted

to Technology Center 2800 by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT". The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Technology Center Fax Center number is (571) 273-8300.

  
James Vannucci